

Algebraic Concepts  
Lesson 23: Inverse Variation  
Math for Standards

Name \_\_\_\_\_

Date \_\_\_\_\_

Inverse variation is similar to direct variation. In direct variation, when one variable got larger, so did the other. In inverse variation, as one variable gets bigger, the other gets \_\_\_\_\_.

$k$  is the constant of variation.

The equation for inverse variation is

To find  $k$ , choose a point in the given data and \_\_\_\_\_ one of the equations.

Example 1: The table shows a relationship between two variables. Is this an example of inverse variation? Find  $k$  and write an equation for the data.

a.

x	3	6	12	24
y	20	10	5	2.5

b.

x	100	50	25	12.5
y	2	4	8	16

Example 2:  $y$  varies inversely as  $x$  and  $y = 5$  when  $x = 85$ . Write an equation for the relationship, then find  $y$  when  $x = 17$ .